

UDC 711

Wang Haoyu, Li Zhenyu

College of Architecture and Urban Planning, Tongji University,
 China, Shanghai, Yangpu District, Siping Road 1239, 200092
 e-mail: trawhy@163.com, lizhenyu.tongji@outlook.com

COMPARISON STUDY OF TYPICAL HISTORICAL STREET SPACE BETWEEN CHINA AND GERMANY: FRIEDRICHSTRASSE IN BERLIN AND CENTRAL STREET IN HARBIN AS EXAMPLES

Abstract: *The article analyses the similarities and the differences of typical historical street space and urban fabric in China and Germany, taking Friedrichstrasse in Berlin and Central Street in Harbin as examples. The analysis mainly starts from four aspects: geographical environment, developing history, urban space fabric and building style. The two cities have similar geographical latitudes but different climate. Both of the two cities have a long history of development. As historical streets, both of the two streets are the main shopping street in the two cities respectively. The Berlin one is a famous luxury-shopping street while the Harbin one is a famous shopping destination for both citizens and tourists. As for the urban fabric, both streets have fishbone-like spatial structure but with different densities; both streets are pedestrian-friendly but with different scales; both have courtyards space structure but in different forms. Friedrichstrasse was divided into two parts during the World War II and it was partly ruined. It was rebuilt in IBA in the 1980s and many architectural masterpieces were designed by such world-known architects like O.M. Ungers, Aldo Rossi, Rem Koolhaas, Jean Nouvel and I.M. Pei. However, Harbin was once occupied by Russian as the colonial area, so the buildings on Central Street are mostly of Russian style. The article tries to explore the relationship between the historical and geographical environment and the urban commercial street space and urban space texture through this comparison. The comparison is to play a reference role in the regeneration of the historical street in China. This paper is subsidized by NSFC project which is named as <Research on Technical System of "Downtown Factory" Community-oriented Regeneration in Yangtze River Delta Region>, NO.51678412.*

Keywords: *comparison, historical street space, urban fabric, China and Germany, Friedrichstrasse, the Central Street*

Introduction

Harbin and Berlin are two metropolises from a global perspective and these two cities has a lot of things in common with each other, no matter about the history or about the geographic factors, etc. The article tries to analyse the similarities and differences between two main shopping streets, Friedrichstrasse in Berlin and the Central Street in Harbin, from the perspective of geographic factors, historical factors, urban space factors and architectural factors. One of the purposes is to explore how do external environmental factors and internal historical factors infect the form of urban texture.

Methodology

The research goal is to do a comparative study of two streets so it is mainly based on the methodology of analysing the similarities as well as the differences of the two streets. However, different methods of analysis would be adopted when doing different influencing factors analysing.

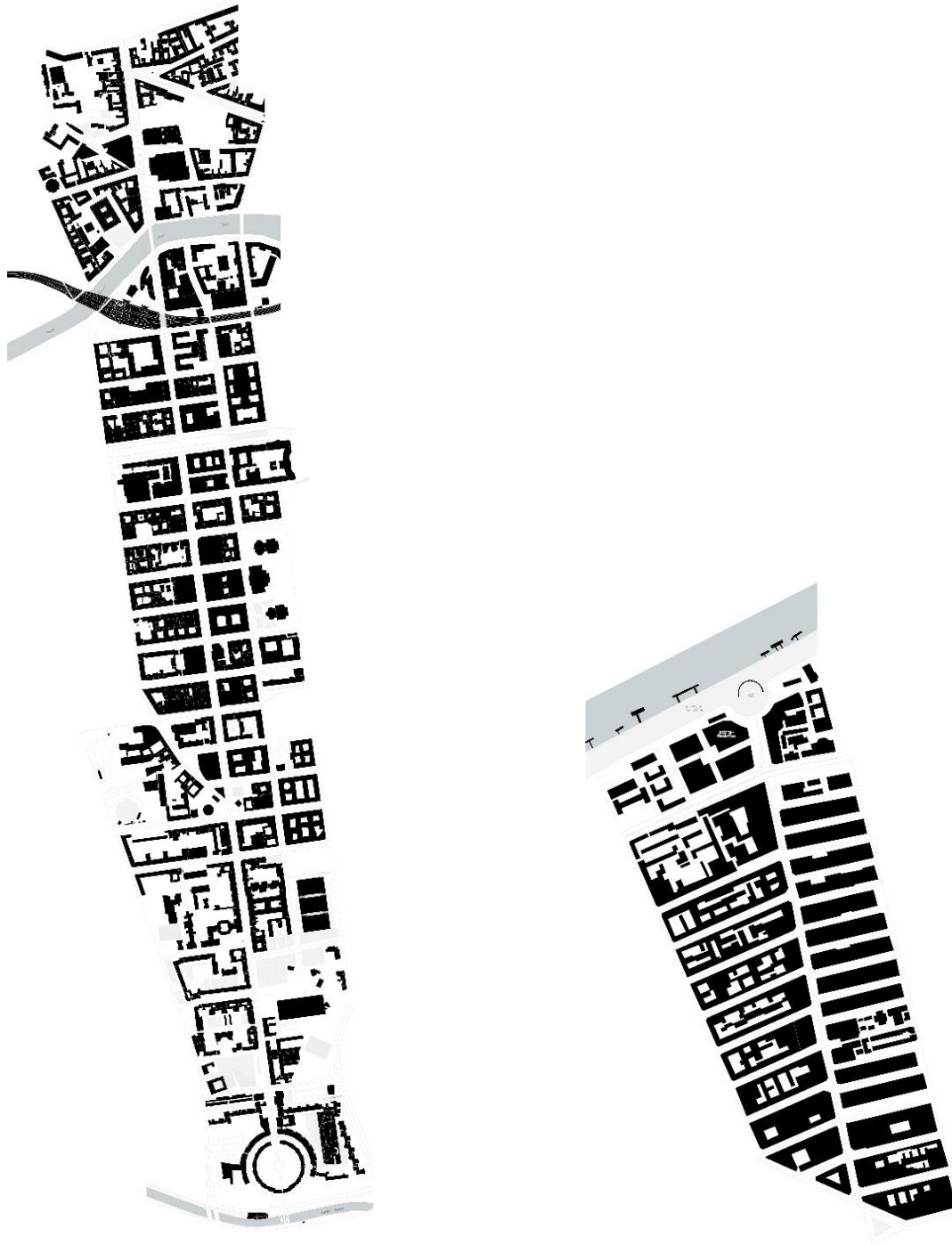


Figure 1. Friedrichstrasse plan (left) & the Central Street plan (right)

Measurement and analysis

1. Geographic Analysis

Berlin and Harbin have a similar latitude around 50 degrees the north. Nevertheless, the weather is quite different. Berlin is one of the largest cities in the central Europe. It has a mild continental climate with hot summers and cold winters. However, Harbin is the northernmost capital city in China. The four seasons are distinct, the winter is long and cold, and the summer is short and cool.

This influences the buildings and the space quite a lot.

From the city plan view, Friedrichstrasse is closer to the centre of the city (Fig.2), while the Central Street is located on the north side of the city centre (Fig.3), on the bank of the Songhua River. However, both of these two streets can attract a large number of visitors each year.

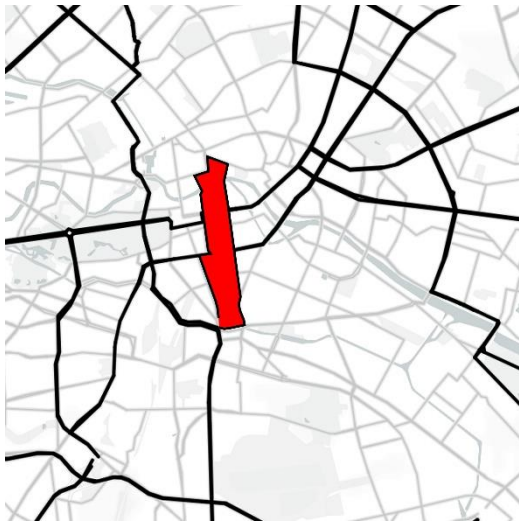


Figure 2. Friedrichstrasse position in city



Figure 3. The Central Street position in city

Friedrichstrasse is much longer than the Central Street. The former is about 3.5km long while the latter is about 1.4km long. Friedrichstrasse starts from north of old Mitte and ends in Hallesches Tor in Kreuzberg in the south. As the road is north-south trend, it crosses several east-west trend roads like the Leipzig Street and Unter den Linden with subway U6 line running underground. During the WWII, it was divided into two parts by the Checkpoint Charlie on the Berlin Wall.

The Central Street starts from the Youyi Road in the north and ends at the Tongjiang Street in the south. It is 1,450 meters long and 21.34 meters wide. The Central Street district covers an area of 94.05 hectares, about one square kilometre. The most distinctive feature is that the entire street is paved with square stones.

2. Historical Analysis

Both of the two cities have a long history of development. Berlin experienced the World War II and was divided into two parts – the West Berlin and the East Berlin. The Friedrichstrasse was divided by the Berlin Wall (Fig.4), being badly damaged during the period.

Checkpoint Charlie was where Friedrichstrasse was divided apart. The upper part is the East Berlin while the lower part is the West Berlin.

After the World War II, Friedrichstrasse was rebuilt in quite different ways between West and East Berlin. However, after the fall of the Berlin wall, it is rebuilt integrally. Berlin hold the IBA, inviting outstanding architect from all over the world to do projects in the whole Berlin. The appearance of Friedrichstrasse has changed dramatically after the World War II. However, in the process of redevelopment of the block, there are still some rules for reconstruction to be complied with, so the entire block looks similar to that before the reconstruction (Fig.5). The Friedrichstrasse experienced once extreme damage and twice reconstruction, and finally it became one of the main shopping streets in Berlin.

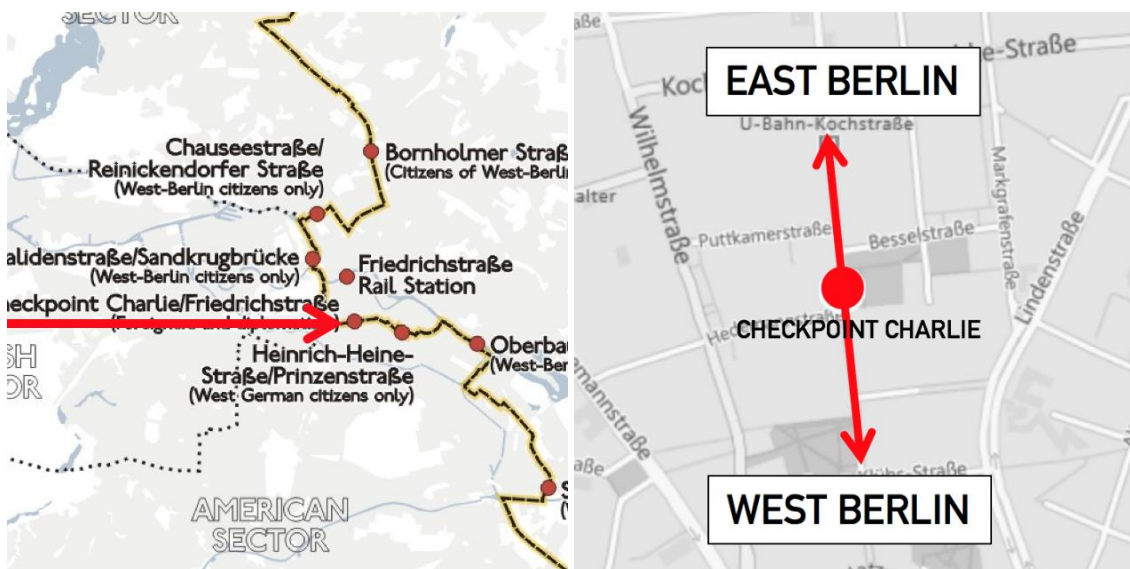


Figure 4. A section of the Berlin Wall and the check point Charlie

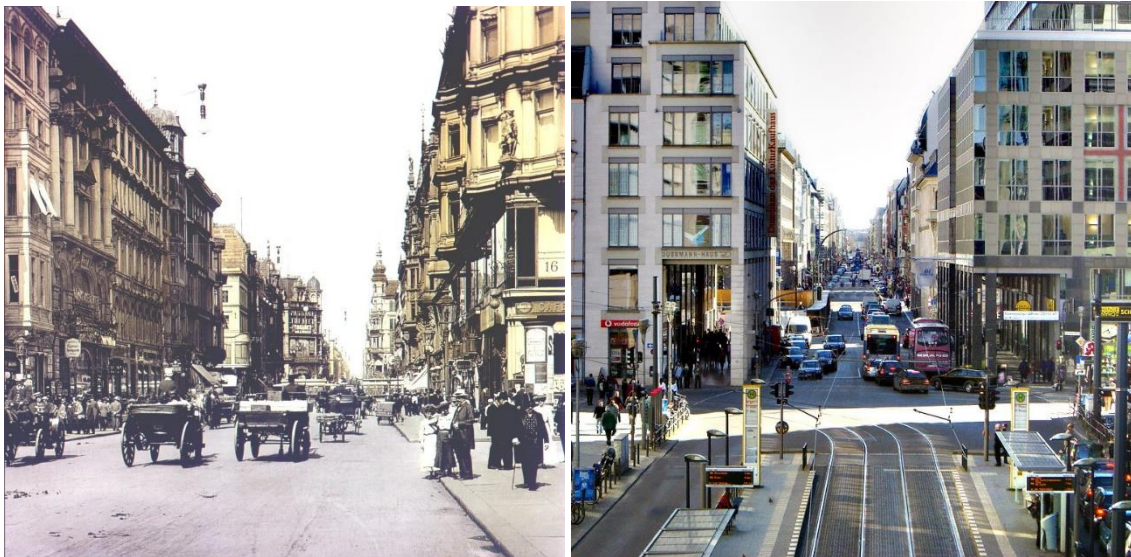


Figure 5. Friedrichstrasse in 1900s & 2007

Source: <https://commons.wikimedia.org/wiki/Friedrichstraße>

The construction of the Central Street started in 1898 and it was called “China Street” at that time because it is the place where Chinese people gathering. What is interesting is that the Central Street’s name changed many times during the past 100 years like “China Street”, “Anti-revisionism Street” and so on. After the commercial rebuilt, it has become the most attractive shopping area in Harbin now.

As for the comparison. The most important one is that the Friedrichstrasse experience extreme damage while the Central Street is more about renovation rather than rebuild.

3. Urban Space Analysis

3.1. Space of city

It can be easily noticed from the plan (Fig.1) that though Friedrichstrasse is much longer than the central street, its blocks are bigger as well. Therefore, it has over 30 blocks along the street while the central street has about 26 blocks. The amount of blocks is similar.

Using the method of Figure-ground relationship analysis, once the colour is reversed, the context of the street can be easily recognized. Both of the two streets have a structure of fish bone and look quite similar to each other (Fig.7). Both of the two streets have a round square at the end. The Friedrichstrasse's square is in the south end, while the Central Street's is in the north.

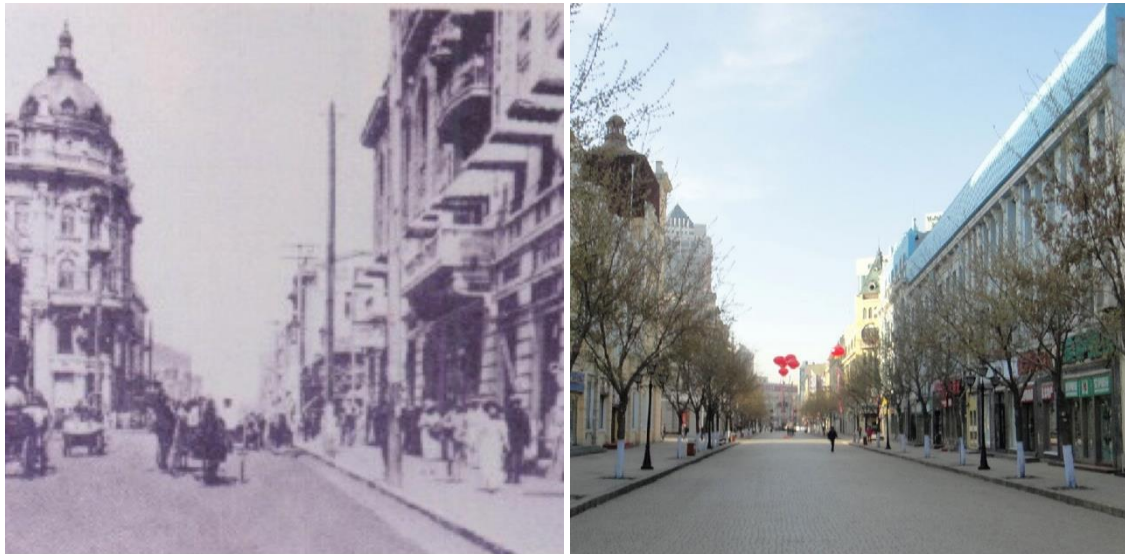


Figure 6. The Central Street in 1920 & 2012

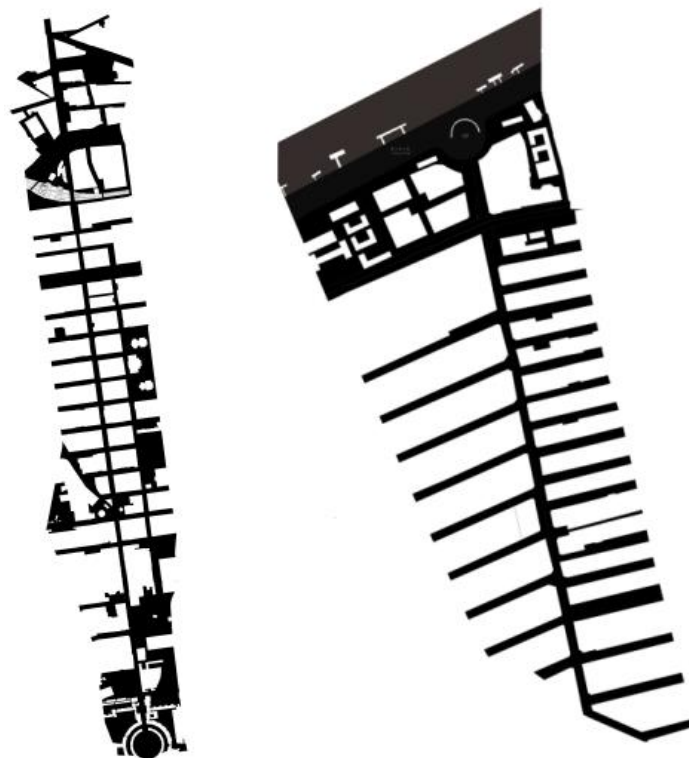


Figure 7. Fish Bone Structure

Compare the city space structure. The Friedrichstrasse is average in the scale of different blocks, but the central street has a density change between the left part and the right part.

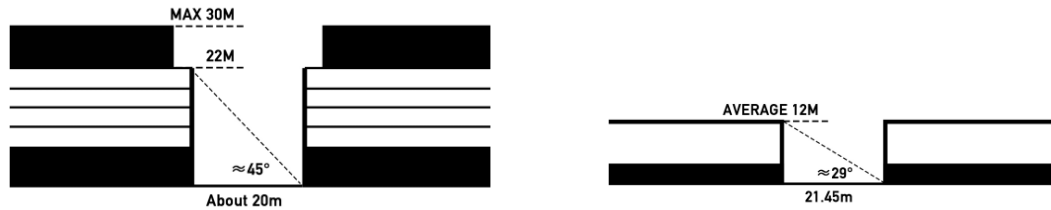


Figure 8. Street Section Analysis

3.2. Space of street

There is a scale difference between Friedrichstrasse and the central street. German Architect Josef Paul Kleinhues set several principles during the rebuilt of Berlin City. One of the principles is about the buildings' height. The cornice height should be restricted to 22 meters and the roof height should be no more than 30 meters. This principle is also applied on Friedrichstrasse. According to the book written by Aihara Yoshinobu 'The Aesthetics of Town Space' the ratio of D to H is 0.9, which is a comfortable scale of street.

In addition, for the central street in Harbin, the ratio is 1.78. It is a little bit wider but the average height of the buildings is 12 meters, which is much lower than that in Berlin.

The scale of the two streets also fit for the usage. The left one is used by both pedestrian and vehicles, but the right one is only used by pedestrian.

3.3. Space of blocks

As is shown in the plan, both of the two streets are consisted of city blocks with courtyards. The difference can be easily recognized that the Berlin courtyards look like points while the Harbin courtyards are more like bars or lines (Fig 9&10).



Figure 9. Courtyards of Friedrichstrasse



Figure 10. Courtyards of the Central Street

4. Architectural Analysis

IBA started in 1980s, and many famous architects were invited to Berlin to rebuild the city. Some of the projects are located on Friedrichstrasse and most of them are of mixed usage. The government were tried to activate this area by the combination of different functions.

German architect Ungers, who was a professor in TU Berlin who used his cube forms here again, and the shape of the buildings responded to the principle of building height very well. Aldo Rossi provided a new way to respond to the history. His idea came from the Diversification in architecture caused by Land privatization. Therefore, he exaggerated the facade, using different colours, which is quite attractive. The project of Koolhaas has a very cool roof stretching out from the building. In addition to the architects mentioned above, there are still many famous architects evolved in the project, like Zaha Hadid, Jean Nouvel, Hans F.Kollhoff, I.M. Pei, Arata Isozaki, etc.

Compared to Friedrichstrasse, there is no buildings designed by worldwide famous architect in the central street in Harbin, but the historical buildings here are also of great significance. The first example is the Modern Hotel. It is the most important building along the whole street. Same as the street itself, the name of the hotel changed many times as well. It even has a Russian name and a French name for the reason of owner change. The second one is the education bookstore. It is a Baroque style building, and it was a food shop at first, and then became a bookstore. In 2013, it is transformed into a tourist center. The final one is the Flood Control Memorial Tower. It is built to memorize the success of flood control in 1957. It is in the end of the central street, facing Songhua River.

Conclusion

Based on the analysis above, the differences and similarities between the two streets can be clearly summarized in the following table.

Friedrichstraße - Berlin	ASPECTS		Central Street - Harbin
around 50°N	I GEOGRAPHY	LATITUDE	around 50°N
center (west)		POSITION IN CITY	center (north)
3.5 km		LENGTH	1.4 km
rebuilt	II HISTORY	/	renovated
over 30 blocks fishbone average	III SPACE	CITY	about 26 blocks fishbone density change
D/H=0.9 45° car / pedestrian		STREET	D/H=1.78 29° pedestrian
square regular shape irregular distribution		BLOCK	rectangle irregular shape regular distribution
worldwide famous architects	IV ARCHITECTURE	ARCHITECTS	Russian architects
similarities and differences		STYLES	Similarities

Figure 11. Comparison as Conclusion

The most important part is about the space. The central street has a better ratio of D to H, but it seems like Friedrichstrasse is much more abundant in most aspects.

Both of the two streets have very important reference value for the study of urban commercial space. The generation of urban space and urban fabric has a more or less relationship with the environment of the city, local culture, and historical factors.

References

1. Li Shuo (2017). *'The Symbiosis of Berlin's Urban Buildings and Historical Environment': dissertation for the degree of Master of Architecture of Zhengzhou University.*
2. Li Zhenyu, Liu Zhiwei (2004). 'Revelation on the Design of IBA's New Inner-city Residence: Review of Berlin International Architecture Exhibition from 1984 to 1987', *The Architect* 1, 29-33.
3. Liu Qianying (2015). 'Berlin: Democracy and Vitality of City Streets', *Urban Planning International* 30(S1), 116-119.
4. Yu Chao (2012). 'Historical Block Reconstruction Plan: Taking Harbin Central Avenue Historic Block Renovation Plan as an Example', *Value Engineering* 14, 74-75.
5. N.A. (2011) 'Northeast Office Reception Site – Modern Hotel', *Bridge of Century* 20, 37.
6. Zhong Lei (2010) 'Talking about Baroque Architecture from Harbin Education Bookstore', *Journal of Changchun Normal University Natural Science* 6, 150-151.